

WHAT IS CLAIMED:

1 1. An implant adapted to be placed between vertebrae comprising:
2 a spacer having a first end for contacting a first vertebrae and a
3 beam extending from the first end; and
4 a base adapted to be mounted to a second vertebrae, with the
5 beam mounted to the base.

1 2. The implant of claim 1 wherein the beam has an elongated
2 aperture therein and the elongated aperture receives a post extending from
3 the base.

1 3. The implant of claim 2 wherein a lock cooperates with the post
2 of the base to secure the beam to the base.

1 4. The implant of claim 1 wherein the beam can be mounted to the
2 base in a plurality of positions.

1 5. The implant of claim 1 wherein the end of the spacer has a
2 cross-section that is one of circular, elliptical, oval and ovoid.

1 6. The implant of claim 1 wherein the implant is positioned
2 between the S1 and L5 vertebrae.

1 7. An implant adapted to be placed between vertebrae comprising:
2 a spacer adapted to contact a first vertebra; and
3 a base having at least a flange adapted to engage a second
4 vertebra and the spacer engaging the base.

1 8. The implant of claim 7 wherein the implant is positioned
2 between the S1 and L5 vertebrae.

1 9. An implant adapted to be placed between L5 and S1 vertebrae
2 comprising:
3 a body;

4 at least one hook extending from the body and adapted
5 to allow the body to engage a S1 vertebra;

6 a beam extending from the body, wherein the beam has a distal
7 end that contacts a L5 vertebra; and

8 a device that can secure the beam to the body.

1 10. The implant of claim 9 wherein:

2 at least part of the implant is comprised of a material selected
3 from the group consisting of: polyetheretherketone,
4 polyaryletheretherketone, and polyetherketoneketone.

1 11. The implant of claim 9 wherein:

2 at least part of the implant is comprised of a material selected
3 from the group consisting of: polyetherketoneetherketoneketone,
4 polyetheretherketoneketone, polyketone, and polyetherketone.

1 12. The implant of claim 9 wherein:

2 at least part of the implant is comprised of titanium.

1 13. The implant of claim 9 wherein the device can secure the beam
2 to the body in a plurality of positions.

1 14. The implant of claim 9 wherein the distal end of the beam is
2 bulbous.

1 15. The implant of claim 9 wherein the distal end of the beam is one
2 of elliptical, ovoid, oval, and round.

1 16. The implant of claim 9 wherein the distal end of the beam
2 provides a surface which is at an angle to the beam, which surface is adapted
3 to engage the L5 vertebra.

1 17. The implant of claim 9 wherein the distal end of the beam
2 provides a surface that is adapted to spread a contact load between the L5
3 vertebra and the distal end.

1 18. The implant of claim 9 wherein the distal end of the beam is
2 adapted to engage a spinous process of the L5 vertebra.

1 19. The implant of claim 9 wherein the distal end of the beam is
2 adapted to engage a spinous process of the L5 vertebra over a conforming
3 contact area.

1 20. The implant of claim 9 wherein the distal end of the beam
2 includes a convex surface that is adapted to engage a spinous process of the
3 L5 vertebra to spread the load between the distal end of the beam and the
4 spinous process of the L5 vertebrae.

1 21. The implant of claim 9 wherein the beam includes an elongated
2 aperture and the device extends through the aperture and can be secured to
3 the aperture in a plurality of positions in order to position the beam relative to
4 the body in a plurality of positions.

1 22. The implant of claim 9 wherein the body includes a first portion
2 and a second portion with a beam platform located between the first and
3 second portions and the beam platform spaced from the first and second
4 portions in order to space the beam from the first and second portions.

1 23. The implant of claim 22 wherein the hook extends from the first
2 portion and another hook extends from the second portion.

1 24. The implant of claim 22 wherein the device extends from the
2 platform.

1 25. The implant of claim 9 including a device that secures the base
2 to the S1 vertebra.

- 1 26. An implant adapted to be placed between vertebrae comprising:
2 a body;
3 at least one hook extending from the body to allow the body to
4 engage a vertebra;
5 a beam extending from the body, the beam having a distal end
6 that contacts a spinous process of another vertebra; and
7 a device that secures the beam to the body.
- 1 27. The implant of claim 26 wherein:
2 at least part of the implant is comprised of a material selected
3 from the group consisting of: polyetheretherketone,
4 polyaryletheretherketone, and polyetherketoneketone.
- 1 28. The implant of claim 26 wherein:
2 at least part of the implant is comprised of a material selected
3 from the group consisting of: polyetherketoneetherketoneketone,
4 polyetheretherketoneketone, polyketone, and polyetherketone.
- 1 29. The implant of claim 26 wherein:
2 at least part of the implant is comprised of titanium.
- 1 30. The implant of claim 26 wherein the device secures the beam to
2 the body in a plurality of positions.
- 1 31. The implant of claim 26 wherein the distal end of the beam is
2 bulbous.
- 1 32. The implant of claim 26 wherein the distal end of the beam is
2 one of elliptical, ovoid, oval, and round.
- 1 33. The implant of claim 26 wherein the distal end of the beam
2 provides a surface which is at an angle to the beam, which surface is adapted
3 to engage a L5 vertebra.

1 34. The implant of claim 26 wherein the distal end of the beam
2 provides a surface that is adapted to spread a contact load between a L5
3 vertebra and the distal end.

1 35. The implant of claim 26 wherein the distal end of the beam is
2 adapted to engage a spinous process of a L5 vertebra.

1 36. The implant of claim 26 wherein the distal end of the beam is
2 adapted to engage a spinous process of a L5 vertebra over a conforming
3 contact area.

1 37. The implant of claim 26 wherein the distal end of the beam
2 includes a convex surface that is adapted to engage a spinous process of a
3 L5 vertebra in order to spread the load between the distal end of the beam
4 and the spinous process of the L5 vertebrae.

1 38. The implant of claim 26 wherein the beam includes an elongated
2 aperture and the device extends through the aperture and can be secured to
3 the aperture in a plurality of positions in order to position the beam relative to
4 the body in a plurality of positions.

1 39. The implant of claim 26 wherein the body includes a first portion
2 and a second portion with a beam platform located between the first and
3 second portions and the beam platform spaced from the first and second
4 portions in order to space the beam from the first and second portions.

1 40. The implant of claim 39 wherein the hook extends from the first
2 portion and another hook extends from the second portion.

1 41. The implant of claim 39 wherein the device extends from the
2 platform.

1 42. The implant of claim 26 including a device that secures the base
2 to an S1 vertebra.

1 43. An implant adapted to be placed between vertebrae comprising:
2 a body having first and second portions with a platform located
3 between and spaced and extending from the first and second portions;
4 first and second hooks extending from the first and second
5 portions respectively in a direction opposite to the direction that the
6 platform extends from the first and second portion, wherein the hooks
7 are adapted to engage a vertebra;
8 a beam with a distal end having a surface adapted to contact a
9 spinous process of a vertebra, which surface is at an angle to the
10 beam; and
11 a device that can selectively position the beam relative to the
12 body in a plurality of positions.

1 44. The implant of claim 43 wherein:
2 at least part of the implant is comprised of a material selected
3 from the group consisting of: polyetheretherketone,
4 polyaryletheretherketone, and polyetherketoneketone.

1 45. The implant of claim 43 wherein:
2 at least part of the implant is comprised of a material selected
3 from the group consisting of: polyetherketoneetherketoneketone,
4 polyetherether-ketoneketone, polyketone, and polyetherketone.

1 46. The implant of claim 43 wherein:
2 at least part of the implant is comprised of titanium.

1 47. The implant of claim 43 wherein the device secures the beam to
2 the body in a plurality of positions.

1 48. The implant of claim 43 wherein the distal end of the beam is
2 bulbous.

1 49. The implant of claim 43 wherein the distal end of the beam is
2 one of elliptical, ovoid, oval, and round.

1 50. The implant of claim 43 wherein the distal end provides a
2 surface which is at an angle to the beam, which surface is adapted to engage
3 a L5 vertebra.

1 51. The implant of claim 43 wherein the distal end provides a
2 surface that is adapted to spread a contact load between a L5 vertebra and
3 the distal end.

1 52. The implant of claim 43 wherein the distal end of the beam is
2 adapted to engage a spinous process of a L5 vertebra.

1 53. The implant of claim 43 wherein the distal end of the beam is
2 adapted to engage a spinous process of a L5 vertebra over a conforming
3 contact area.

1 54. The implant of claim 43 wherein the distal end of the beam
2 includes a convex surface that is adapted to engage a spinous process of a
3 L5 vertebra in order to spread the load between the distal end of the beam
4 and the spinous process of the L5 vertebra.

1 55. The implant of claim 43 wherein the beam includes an elongated
2 aperture and the device extends through the aperture and can be secured to
3 the aperture in a plurality of positions in order to position the beam relative to
4 the body in a plurality of positions.

1 56. The implant of claim 43 wherein the device extends from the
2 platform.

1 57. The implant of claim 43 including a device that secures the base
2 to an S1 vertebra.

1 58. An implant adapted to be placed between vertebrae comprising:
2 a body having first and second portions with a platform located
3 between and spaced and extending from the first and second portions;
4 a hook extending from the base in a direction opposite to the
5 direction that the platform extends from the first and second portion;
6 the hook adapted to engage a vertebra;
7 a beam with a distal end having a concave surface that is
8 adapted to contact a spinous process of a vertebra, which concave
9 surface is at an angle to the beam; and
10 a device that can selectively position the beam relative to the
11 body.

1 59. The implant of claim 58 wherein:
2 at least part of the implant is comprised of a material selected
3 from the group consisting of: polyetheretherketone,
4 polyaryletheretherketone, and polyetherketoneketone.

1 60. The implant of claim 58 wherein:
2 at least part of the implant is comprised of a material selected
3 from the group consisting of: polyetherketoneetherketoneketone,
4 polyetheretherketoneketone, polyketone, and polyetherketone.

1 61. The implant of claim 58 wherein:
2 at least part of the implant is comprised of titanium.

1 62. The implant of claim 58 wherein the device secures the beam to
2 the body in a plurality of positions.

1 63. The implant of claim 58 wherein the distal end of the beam is
2 bulbous.

1 64. The implant of claim 58 wherein the distal end of the beam is
2 one of elliptical, ovoid, oval, and round.

1 65. The implant of claim 58 wherein the distal end of the beam
2 provides a surface which is at an angle to the beam, which surface is adapted
3 for engaging a L5 vertebra.

1 66. The implant of claim 58 wherein the distal end of the beam
2 provides a surface that is adapted to spread a contact load between a L5
3 vertebra and the distal end.

1 67. The implant of claim 58 wherein the distal end of the beam is
2 adapted to engage a spinous process of a L5 vertebra.

1 68. The implant of claim 58 wherein the distal end of the beam is
2 adapted to engage a spinous process of a L5 vertebra over a conforming
3 contact area.

1 69. The implant of claim 58 wherein the distal end of the beam
2 includes a convex surface that is adapted to engage a spinous process of a
3 L5 vertebra in order to spread the load between the distal end of the beam
4 and the spinous process of a L5 vertebrae.

1 70. A method for inserting an implant between an L5 and S1
2 vertebrae comprising the steps of:

3 attaching a base of an implant on to the median sacral lamina of
4 the S1 vertebra; and

5 adjusting the position of a beam with a distal end relative to the
6 base so that the distal end can contact a spinous process of an L5
7 vertebra and so that there is a desired spacing between the L5 and the
8 S1 vertebrae.

1 71. The method of claim 70 including the step of removing a bony
2 protuberance from the S1 vertebrae prior to attaching the base to the S1
3 vertebra.

1 72. The method of claim 70 wherein the attaching step includes
2 hooking the base over the S1 vertebra.

1 73. The method of claim 70 without altering the L5 or the S1
2 vertebrae.

1 74. A method for inserting an implant between the vertebrae
2 comprising the steps of:

3 attaching a base of an implant on to the lamina of the a first
4 vertebra; and

5 adjusting the position of a beam with a distal end relative to the
6 base so that the distal end can contact a spinous process of a second
7 vertebra and so that there is a desired spacing between the vertebrae.

1 75. The method of claim 74 including the step of removing a bony
2 protuberance from the first vertebra prior to attaching the base to the first
3 vertebra.

1 76. The method of claim 74 without altering the first or second
2 vertebrae.

1 77. An implant adapted to be placed between vertebrae comprising:
2 a body;

3 at least one hook extending from the body and adapted to allow
4 the body to engage a vertebra;

5 a spacer extending from the body;
6 the spacer having a distal end that is adapted to contact a
7 spinous process of another vertebra; and

8 a device that can secure the spacer to the body.

1 78. A method of implanting a device between S1 and L5 vertebrae
2 in a spine, the method comprising:

3 a. exposing an affected region of the spine posteriorly;

4 b. inserting a base of the device between the S1 and L5
5 vertebrae so that a pair of flanges on the device engage an S1
6 vertebrae;

7 c. selecting a spacer;

8 d. installing the spacer on the base;

9 e. adjusting a position of the spacer between the vertebrae;

10 f. securing the spacer to the base; and

11 g. closing the wound.

1 79. A method of adjusting an implant, the method comprising:

2 a. accessing the implant with a cannula;

3 b. loosening a nut on a shaft that holds a spacer onto a
4 base of the implant; and

5 c. sliding the spacer in one of an upper and lower direction
6 to adjust a position of a bulbous end of the spacer between an S1 and
7 L5 vertebrae.

1 80. A kit for implanting an interspinous implant comprising:

2 a plurality of spacers having a bulbous end and a shaft
3 extending therefrom;

4 a base that is adapted to engage an S1 vertebrae; and

5 a lock that secures one of the plurality of spacers onto a post
6 extending from the base.

1 81. A kit for implanting an interspinous implant comprising:

2 a plurality of spacers;

3 a shaft to engage a spacer selected from the plurality of
4 spacers;

5 a base that engages a medial sacral lamina; and

6 a lock that secures the shaft onto a post extending from the base.